



# State of New Jersey

Department of Environmental Protection

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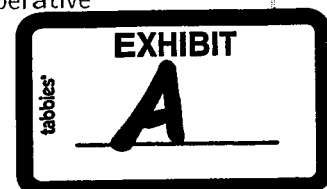
IN THE MATTER OF POLY- AND PERFLUOROALKYL :  
SUBSTANCES (PFAS) GENERATED BY: :

SOLVAY SPECIALTY POLYMERS USA, LLC; :  
SOLVAY SOLEXIS, INC.; :  
E.I. DU PONT DE NEMOURS & COMPANY; :  
DOWDUPONT, INC.; :  
DUPONT SPECIALTY PRODUCTS USA, LLC; :  
THE CHEMOURS COMPANY FC, LLC; :  
THE CHEMOURS COMPANY; and, :  
THE 3M COMPANY :

## STATEWIDE PFAS DIRECTIVE, INFORMATION REQUEST AND NOTICE TO INSURERS

This Directive, Information Request, and Notice to Insurers (hereafter, "Directive") is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection ("Department") by N.J.S.A. 13:1D-1 et seq., the Spill Compensation and Control Act ("Spill Act"), N.J.S.A. 58:10-23.11 et seq., the Water Pollution Control Act ("WPCA"), N.J.S.A. 58:10A-1 et seq., the Air Pollution Control Act ("APCA"), N.J.S.A. 26:2C-1 et seq., and the Solid Waste Management Act ("SWMA") N.J.S.A. 13:1E-1 et seq., to Solvay Specialty Polymers USA, LLC and its predecessor Solvay Solexis, Inc. (collectively, "Solvay"), E.I. du Pont de Nemours & Company, ("DuPont"), DowDuPont, Inc. ("DowDuPont"), DuPont Specialty Products USA, LLC, The Chemours Company FC, LLC ("Chemours FC, LLC"), The Chemours Company ("Chemours") and The 3M Company ("3M") (collectively, the "Respondents") to notify them that the Department believes them to be responsible for the significant contamination of New Jersey's natural resources, including the air and waters of the State, with poly- and perfluoroalkyl substances ("PFAS"), including perfluorononanoic acid ("PFNA"), perfluorooctanoic acid ("PFOA"), and perfluorooctanesulfonic acid ("PFOS"), and their replacement compounds, including but not limited to "GenX".

PFAS are being discovered in drinking water, groundwater, surface waters, sediments, soils, air, fish, plants, and other natural resources across New Jersey on a near daily basis. These PFAS compounds constitute a substantial threat to human health and the environment and a statewide public nuisance: they are extremely resistant to degradation and thus persist indefinitely in the environment; they bioaccumulate; they are commonly contained in consumer and household products; and contamination from PFAS is now ubiquitous in New Jersey. While Respondents and their predecessors in interest have understood the toxic characteristics of PFAS for decades, regulatory agencies around the world are only now coming to understand the true nature and dangers of these global contaminants. As further detailed below, the Department has expended and will continue to expend tremendous resources to identify and investigate the presence of PFAS in New Jersey's environment, as well as to monitor, treat, clean up, and/or remove PFAS in impacted areas. As a result, the Department has determined that it is imperative



to the protection of public health and safety and the environment of New Jersey that such investigation, monitoring, testing, treatment, cleanup and removal continue, and that Respondents, not New Jersey residents, pay for these activities.

To protect public health and the environment, the Department requires a full understanding of Respondents' historical development, manufacture, transport, use, storage, release, discharge, and/or disposal of PFAS in New Jersey. The Department likewise requires an immediate understanding of Respondents' current development, manufacture, transport, use, storage, release, discharge, and/or disposal of any chemical replacements for PFAS in New Jersey. While these replacement chemicals have been touted as short-chain and having shorter half-lives, some may have similar toxicity and, like their predecessors, they do not break down in the environment and have also been detected in drinking water, groundwater and surface waters in New Jersey. Therefore, the Department is directing that Respondents provide a complete accounting of their historical and current activities with respect to these chemicals in New Jersey.

Under the Spill Act, WPCA, SWMA, and APCA, the Respondents are responsible for PFAS—including PFNA, PFOA, PFOS and their replacement PFAS compounds—that have been discharged or released into New Jersey's air, water and other natural resources, as set forth below.

## **FINDINGS**

### **A. PFAS Contamination in New Jersey**

#### **PFAS: Contaminants of Emerging Concern**

1. Poly- and perfluoroalkyl substances, collectively referred to as PFAS, are man-made chemicals manufactured and used in the United States since the 1940s. PFAS have fire-resistant properties and act as oil, grease and water repellants. They have been used to make numerous household products, including name brands such as Stainmaster®, Scotchgard®, Teflon®, Gore-Tex®, and Tyvek®. PFOS has long been used in aqueous film-forming foam ("AFFF") used to fight fires. There are literally thousands of PFAS compounds.
2. PFAS are highly persistent in the environment and are resistant to metabolic and environmental degradation processes. They are also bioaccumulative, resulting in the buildup of these toxins in living tissue. As a result, people exposed to these substances through drinking water or other means accumulate increasing concentrations of PFAS in their blood. Some PFAS are classified as likely human carcinogens. Studies show that exposure to PFAS may cause testicular cancer, kidney and liver cancer, and autoimmune and endocrine disorders in adults as well as developmental effects to fetuses during pregnancy or to breastfed infants. Other associated human health effects include reduced vaccine response, and increased cholesterol and liver enzymes.
3. DuPont and 3M knew of the health and environmental impacts of PFAS for decades but continued to use them in products and to release them into the environment. 3M knew that PFOA and PFOS were harmful to people and the environment, including based on its own studies from as early as the 1970s. 3M also knew that the chemicals could leach into groundwater and contaminate the environment. DuPont knew for decades that PFOA was toxic, including through studies of its own workers. DuPont also knew that PFOA was being discharged into the environment, but failed to disclose the risks to regulators or the public. Likewise, through its membership in an industry

trade group that conducted toxicology studies on PFNA in the 2000s, Solvay knew or should have known of the adverse effects of PFNA exposure. Solvay knew that it was discharging large amounts of PFNA into the environment from their West Deptford, New Jersey facility at least as early as 1991.

4. The United States Environmental Protection Agency ("EPA") has identified PFAS as "emerging contaminants," which are currently unregulated at the federal level. In 2009, EPA issued preliminary health advisory values for PFOA and PFOS in drinking water of 400 parts per trillion ("ppt") and 200 ppt, respectively. In 2016, EPA reduced its advisories for the chemicals in drinking water to 70 ppt, combined. Other federal agencies have suggested drinking water values should be much lower. Then, in 2018, the U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry ("ATSDR") released draft minimum risk levels—the amount of a chemical a person can eat, drink or breathe each day without a detectable risk to health—for PFOA and PFNA equivalent to 21 ppt, and for PFOS 14 ppt.

**A. Regulation of PFNA, PFOA and PFOS.**

5. In the absence of action at the federal level to meaningfully regulate these contaminants of emerging concern, New Jersey has acted to protect its citizens and environment and to regulate PFNA, PFOA and PFOS, including by seeking to establish Maximum Contaminant Levels ("MCLs") and Groundwater Quality Standards ("GWQS") for these chemicals, and to add these chemicals to the Department's List of Hazardous Substances at N.J.A.C. 7:1E-Appendix A, as well as taking other necessary actions.
6. The New Jersey Drinking Water Quality Institute ("DWQI") is established pursuant to the Safe Drinking Water Act ("SDWA"), N.J.S.A. 58:12A-1 et seq. It is an advisory body that, among other items, provides the Department with maximum contaminant level recommendations for New Jersey-specific drinking water contaminants.
7. The Department establishes MCLs at N.J.A.C. 7:10 pursuant to the SDWA to protect the public against consumption of drinking water contaminants that present a risk to human health. N.J.S.A. 58:12A-13(b). MCLs apply to public community and public non-community water systems, which are required to monitor for contaminants for which MCLs have been established, and to take actions to reduce contaminant levels or other appropriate actions when there is an exceedance of the MCL.
8. GWQS are set forth at N.J.A.C. 7:9C and are implemented as limits on discharges to groundwater pursuant to the New Jersey Pollutant Discharge Elimination System (NJPDDES) rules, N.J.A.C. 7:14A, and as groundwater remediation standards, N.J.A.C. 7:26D-2.2(a).
9. In July, 2015, DWQI recommended to the Department that an MCL for PFNA of 13 ppt be established, and on November 25, 2015, the Department established an interim GWQS for PFNA of 10 ppt pursuant to N.J.A.C. 7:9C-1.7(c).
10. In March 2017, after public comment and a vote, DWQI recommended to the Department that an MCL for PFOA of 14 ppt be established.
11. In November 2017, after public comment and a vote, DWQI recommended to the Department that an MCL for PFOS of 13 ppt be established.

12. On January 16, 2018, the Department adopted a specific GWQS for PFNA of 10 ppt and added PFNA to the Department's List of Hazardous Substances (see 50 N.J.R. 334(a)).
  13. On September 4, 2018, consistent with the recommendation of DWQI, the Department adopted an MCL for PFNA of 13 ppt (see 50 N.J.R. 1939(a)).
  14. On January 17, 2019, the Department solicited public input and posted on its website technical documents in support of its draft Interim Specific Groundwater Quality Criteria for PFOA and PFOS of 10 ppt. See [https://www.nj.gov/dep/dsr/ISGWQC\\_Public\\_Comment\\_PFOS\\_PFOA.html](https://www.nj.gov/dep/dsr/ISGWQC_Public_Comment_PFOS_PFOA.html).
  15. On March 13, 2019, the Department established interim specific groundwater quality criteria for PFOA and PFOS of 10 ppt, pursuant to N.J.A.C. 7:9C-1.7(c). See <https://nj.gov/dep/wms/bears/gwqs.htm>. These interim specific criteria became effective on posting to NJDEP's website, and will remain in effect until replaced with specific criteria. N.J.A.C. 7:9C-1.7(c)(ii).
  16. The Department has submitted to the Office of Administrative Law a notice of proposed rule amendments concerning PFOA and PFOS, which is anticipated to be published in the New Jersey Register on April 1, 2019. The Department will propose amending the Safe Drinking Water Act rules establishing MCLs for PFOA of 14 ppt and for PFOS of 13 ppt; establishing groundwater quality criteria standards for PFOA of 14 ppt and PFOS of 13 ppt; and adding PFOA and PFOS to the List of Hazardous Substances.
- B. PFAS Contamination in New Jersey**
17. The Department's first statewide occurrence study of PFAS in drinking water in 2006, which focused on PFOA and PFOS near facilities that used, handled, stored and/or manufactured PFOA and/or other chemicals, revealed that, out of the 23 drinking water sources sampled, PFOA and PFOS were detected in 65-percent and 30-percent of the systems tested, respectively.
  18. In order to gain further knowledge on the occurrence of PFOA, PFOS and other PFAS in New Jersey's drinking water sources, the Department initiated a second occurrence study in 2009 and early 2010. The results of this second occurrence study revealed that, out of 33 drinking water samples from 20 of New Jersey's 21 counties, between one and eight PFAS compounds were detected in 70-percent of the samples. In the samples tested, PFOA was detected in 57-percent (up to 100 ppt), PFOS was detected in 30-percent (up to 43 ppt), and PFNA was found at the highest reported level in drinking water anywhere in the world, at 96 ppt.
  19. The Department is continuing to study PFAS compounds and their impact on New Jersey's environment. In 2018, the Department performed an assessment of 13 PFAS compounds in the ecosystems of 11 waterways across New Jersey, which included analyzing surface water, sediment and fish tissue samples. The results of this study revealed all surface water samples and most sediment samples to have multiple PFAS compounds. Fish from all waterbodies also contained PFAS compounds, resulting in the need for the Department to issue more restrictive fish consumption advisories for 10 of these sites.
  20. As of March 19, 2019, 564 of 1,069 public water systems (53-percent) have reported the results of PFAS sampling under N.J.A.C. 7:10-5. 70 public water systems not previously identified through

other sampling events – 12-percent of the public water systems reporting – reported levels at or above the recommended MCL for PFNA, PFOA, PFOS, or a combination of the three. Prior to the first quarter monitoring required by N.J.A.C 7:10-5 described above, another 46 water systems reported levels at or above the recommended MCLs for PFNA, PFOA, PFOS or a combination of the three.

21. The Department has also sampled for PFAS as part of remedial investigations in specific locations around the State, including 992 private wells sampled as of June 2018. Through this targeted effort, the Department has detected PFOA in 427 private wells – or 43-percent of the wells sampled – and 284 private wells were found to have levels of PFOA exceeding the proposed MCL. PFOS was found in 304 private wells – or 31-percent of the private wells tested – with detections at 40 wells above the proposed PFOS MCL. As of April 3, 2018, out of the 400 wells sampled as part of the remedial investigation emanating from Solvay's site, 83 wells – 21-percent – required installation of a point of entry treatment ("POET") system for PFNA or PFOA.

### C. Responsible Parties

22. Respondents are responsible for the significant PFAS contamination across New Jersey and the costs the Department has incurred, and will incur, responding to this threat to public health, safety and the environment.

#### 1. Solvay

23. Solvay Specialty Polymers USA, LLC (and its predecessor Solvay Solexis, Inc.) (collectively "Solvay") is a Delaware Corporation with its principal place of business at 10 Leonard Lane, West Deptford, New Jersey.
24. Solvay (formerly known as Ausimont USA, Inc.) has been the owner and operator of a manufacturing facility located at 10 Leonard Lane and Crown Point Road, Block 328, Lots 1.01 and 1.07 on the tax maps of West Deptford Township, Gloucester County, from 1990 to the present (the "Solvay Site"). From approximately 1990 to 2012, Solvay manufactured polyvinylidene fluoride ("PVDF") at this facility, which is a specialty plastic that is utilized in conjunction with lithium batteries, medical and defense uses, semi-conductors, or other instances when a higher level of purity is required. During most of this time, Surflon S-111 was used in the manufacturing process for PVDF. Surflon S-111 is composed of approximately 74% PFNA. Solvay's facility was considered to have the second highest capacity in the world for purposes of using Surflon S-111 to make PVDF. As a result of Solvay's operations at the facility, it discharged massive amounts of the Surflon S-111 (primarily, PFNA) into the surrounding air and water. The site, off-site properties, and New Jersey's natural resources, including air, surface waters, groundwater, and drinking water sources, are contaminated with PFNA.
25. Additionally, Solvay also used sodium perfluorooctanoate (NaPFO) as a surfactant at its facility. The NaPFO (which is a salt of PFOA) was supplied to Solvay by 3M. NaPFO degrades into PFOA. The site and surrounding area are also contaminated with PFOA as a result of Solvay's activities at the facility.
26. As of March 19, 2019, out of the 400 wells sampled as part of the remedial investigation around the Solvay Site, 83 wells – 21-percent – required installation of a POET system for PFNA or PFOA.

27. Currently, Solvay is using a replacement chemical for PFNA for use in the manufacture of its polyvinylidene product. This compound, identified in Wang, 2013, as “Solvay’s product” (CAS No. 329238-24-6) is a chloro perfluoro polyether carboxylate and has been identified in environmental matrices in Salem and Gloucester Counties.

## 2. DuPont / DowDuPont

28. DuPont is a Delaware Corporation with its principal place of business in Wilmington, Delaware. DowDuPont is a Delaware Corporation with its principal place of business in Wilmington, Delaware.
29. DuPont owned and operated Chambers Works, 67 Canal Road and Route 130, located in Pennsville and Carneys Point Townships, Salem County, from 1891 to 2015. PFOA was used at Chambers Works beginning in the late 1950s. At varying times PFOA was used to, among other things, manufacture fluoroelastomers, perfluoroelastomers and specialty fluoroelastomers used in a variety of consumer and other products for their chemical non-stick and heat-resistant properties. Telomers were also used and manufactured at Chambers Works, and PFOA is a by-product of the telomer manufacturing process. DuPont also accepted large quantities of PFOA-containing waste from off-site facilities, including its Washington Works facility in Parkersburg, West Virginia, and discharged this waste along with wastewater from its on-site PFOA-related processes through its wastewater treatment plant. As a result of the above, DuPont has discharged PFOA as well as other PFAS, including PFNA, from Chambers Works for decades, which has contaminated the site and the surrounding area.
30. As set forth below, DuPont spun-off its “performance chemicals” business lines (including Teflon and various other products associated with PFAS constituents) by creating Chemours on July 1, 2015. As part of a series of related transactions, DuPont also transferred its Chambers Works property to Chemours FC, LLC at that time. Nonetheless, DuPont continued to operate an industrial facility on the Chambers Works property, manufacturing aramids and fluoroelastomers on a portion of the Chemours Chambers Works site pursuant to an industrial lease (whereby DuPont was the tenant and Chemours FC, LLC was the landlord). In March of 2018, DuPont announced that would cease production of aramids on its Chambers Works leasehold but that it would continue to produce fluoroelastomers on the Site.
31. With respect to the area surrounding Chambers Works, sampling of residential drinking water wells in the area has revealed contamination at least five miles away from the facility. In total, 341 individual drinking water wells have been sampled, and 168 have exceeded applicable screening criteria, based on the concentrations of PFOA, PFNA, or PFOA and PFOS combined. GenX was also detected in residential drinking water. Investigation of contamination in this area, aside from these selected wells, remains necessary in order to fully assess impacts to groundwater, surface water, soils, sediments and biota.
32. Additionally, DuPont has been the owner and operator of its Parlin Facility, located at 250 Cheesequake Road, Sayreville Borough, Middlesex County since 1904. Currently, some or all of the facility is owned by another DuPont entity, DuPont Specialty Products USA, LLC. Beginning in the late 1970s, DuPont blended fluoropolymers at its Parlin facility, and produced Teflon® finishes. As a result of these activities PFOA was released into the environment from the facility. In 2006 and 2007, DuPont discovered PFOA releases, both on-site and off-site. Among other things, those releases have contaminated groundwater, including off-site. In an email dated February 4, 2019,

DuPont provided sampling results to the U.S. Environmental Protection Agency and the Department of sampling conducted in several groundwater monitoring wells at the DuPont Parlin facility. Those results show that GenX was detected in several groundwater monitoring wells at the DuPont Parlin facility. Also, previous sampling of finished water at the Perth Amboy Wellfield has documented the presence of PFOA at concentrations both above and below the Department's Interim Specific Ground Water Quality Standard (ISGWQS) of 10 ppt; individual supply wells may exceed the PFOA ISGWQS. The Perth Amboy Wellfield is located approximately one and a half miles south of the Parlin facility.

33. DuPont also manufactured PFOA in North Carolina that was then transported, used, disposed of, or discharged in New Jersey, further making it in any way responsible for such contamination. After 3M decided to stop manufacturing PFOA due to its toxicity, DuPont began producing its own feedstock of the chemical in 2002. DuPont manufactured PFOA until replacing it with GenX. DuPont manufactured and utilized GenX until transferring its performance chemicals business and liabilities to Chemours.
34. In 2017, DuPont merged into a direct subsidiary of DowDuPont, Inc., becoming owned and controlled by DowDuPont. DowDuPont is restructuring and moving the vast majority of the assets of DuPont to itself and other entities, which it will spin off into independent, publicly traded entities. These transactions, along with the transfer of the Parlin Site to DuPont Specialty Products USA, LLC and the industrial lease at Chambers Works, may trigger the requirements of the Industrial Site Recovery Act, N.J.S.A. 13:1K-6, et seq. ("ISRA"), which would require the establishment of an appropriate remediation funding source, among other requirements.

### **3. The Chemours Entities**

35. The Chemours Company is a Delaware Corporation with its principal place of business in Wilmington, Delaware. The Chemours Company FC, LLC is a Delaware Limited Liability Company with its principal place of business in Wilmington, Delaware.
36. In 2013, confronted with mounting PFAS liabilities, DuPont announced its plans to spin off its performance chemicals business into a separate publicly traded company, Chemours. In order to effectuate the spin off and transfer of certain assets and liabilities, a number of corporate entities were created. In 2014, Chemours FC, LLC was created. In 2015, DuPont transferred ownership of the Chambers Works property to Chemours FC, LLC. Following the spin-off, Chemours FC, LLC became a subsidiary of Chemours. Chemours FC, LLC remains the owner of the Chambers Works property, while Chemours operates the site. The Chemours transactions may have also triggered the requirements of ISRA, which would require the establishment of an appropriate remediation funding source, among other requirements.
37. Chemours FC, LLC, as well as Chemours, accepted the transfer of Chambers Works knowing that the site was contaminated with PFOA and other PFAS, that PFAS was discharged at the site, that there was PFAS contamination in the surrounding area, that remediation of the site and the surrounding area would be required as a result of this contamination, and that funds would need to be available for the same.
38. Additionally, since Chemours FC, LLC became the owner and Chemours the operator of Chambers Works, PFOA and other PFAS continue to be discharged at the site.

39. Further, Chemours has agreed to assume certain liabilities of DuPont's with respect to PFOA and other PFAS.
40. Currently, Chemours is using PFAS replacement chemicals, including GenX technology and associated chemicals hexafluoropropylene oxide dimer acid (HFPO-DA) and its ammonium salt, in its manufacturing processes for Krytox® at Chambers Works. As a result of this process, HFPO-DA is discharged into New Jersey's water and emitted into New Jersey's air.
41. HPFOA-DA has been detected in residential drinking water wells surrounding Chambers Works.

#### **4. The 3M Company**

42. 3M is a Delaware Corporation with its principal place of business in St. Paul, Minnesota.
43. 3M is a person in any way responsible for PFOA and PFOS discharged in New Jersey as the primary manufacturer of PFOA, which it supplied to DuPont, Solvay and others, and PFOS, which were both discharged across New Jersey's environment.
44. 3M has been identified by the United States EPA as the dominant global producer of PFOA and related chemicals, manufacturing approximately 85 percent or more of total worldwide volumes of PFOA. 3M supplied PFOA to DuPont for use in its manufacturing processes until at least the early 2000s. DuPont discharged this PFOA in New Jersey, including at Chambers Works and its Parlin facility, resulting in contamination of New Jersey's environment. 3M also supplied NaPFO to Solvay, which it discharged in New Jersey's environment.
45. 3M was also a primary manufacturer of PFOS, and produced AFFF containing PFOS and PFAS. 3M sold AFFF from the 1960s to the early 2000s, which was used at military bases, airports and firefighting training facilities.
46. Use of AFFF in New Jersey has discharged PFOS and other PFAS into New Jersey's environment. For example, AFFF use at Joint Base McGuire-Dix-Lakehurst and FAA William J. Hughes Technical Center has resulted in significant contamination of surrounding drinking water sources and natural resources. The Department's efforts to identify sites where AFFF was used is ongoing.

#### **D. New Jersey PFAS-Related Costs.**

##### **Costs Previously Incurred by the Department**

47. As of March 4, 2019, the Department has incurred at least \$3,105,084.91 to investigate, monitor, test, treat, remediate, clean up and remove PFNA and PFOA from the area surrounding Solvay's facility in West Deptford. And, the Department continues to incur costs associated with PFNA and PFOA on a daily basis.
48. The above-referenced costs do not include all costs previously incurred by the Department, and will be supplemented. Among other things, the Department may seek reimbursement from Respondents for its statewide studies of the occurrence of PFAS and related research and the cost of the Division of Science & Research's labor on PFAS studies.

### Future Costs to be Incurred by the Department

49. The Department expects to incur hundreds of millions of dollars in costs assessing and responding to the discharge of PFAS into the environment of New Jersey.
50. The Department anticipates incurring additional costs related to ongoing and new studies and research projects to further assess the impacts of PFAS on groundwater, surface waters, marine and freshwater fish and other aquatic life, biota, and human health.
51. The Department anticipates incurring costs to investigate, monitor, test, treat, remediate, clean up and remove PFNA, PFOA and PFOS from New Jersey's drinking water and waste water systems.
52. The Department anticipates incurring costs to investigate, monitor, test, treat, remediate, clean up and remove PFNA, PFOA and PFOS from New Jersey's private drinking water wells.
53. The Department anticipates incurring costs to investigate, monitor, test, treat, remediate and clean up and remove PFNA, PFOA and PFOS from New Jersey's natural resources, including groundwater, surface water, soil, sediments and biota.
54. The above list of future costs the Department anticipates incurring is not exhaustive. Rather, this list is meant to provide a framework for estimating future costs related to PFNA, PFOA and PFOS for the purposes of establishing a funding source for these costs to be maintained by Respondents.

### DIRECTIVE

55. The Department is broadly empowered to take appropriate action to prevent the pollution of New Jersey's environment and abate nuisances in connection therewith. N.J.S.A. 13:1D-9(e). The Department is also charged with enforcing New Jersey's environmental laws, including the Spill Act, the WPCA, the SWMA, and the APCA. The Department may direct persons to post a performance bond or other security for the full estimated cost to correct violations of New Jersey's environmental laws. N.J.S.A. 13:1D-9(u).
56. The substances referenced in the paragraphs above are hazardous substances pursuant to the Spill Act, N.J.S.A. 58:10-23.11(b), pollutants pursuant to the WPCA, N.J.S.A. 58:10A-3(n), solid waste pursuant to the SWMA, N.J.S.A. 13:1E-3(a) and air contaminants pursuant to the APCA, N.J.S.A. 26:2C-2.
57. The Department is authorized to seek and obtain information from persons related to discharges or potential discharges of pollutants into the waters of the State, discharges of hazardous substances, disposal of solid waste, and releases of air contaminants. Pursuant to the WPCA, the Department is empowered to assess a person's compliance with the Act, and may request from any person who has information relevant to discharges of pollutants to provide certain documents and/or information to the Department. N.J.S.A. 58:10A-5(a)-(b), -10.3(a). Additionally, pursuant to the Spill Act, persons who may be subject to liability for discharges must immediately notify the Department of same. N.J.S.A. 58:10-23.11e. Further, pursuant to the APCA, the Department is empowered to require the filing of reports concerning information related to emissions, and

persons who cause a release of air contaminants which pose a potential threat to the public health, welfare or the environment are obligated to immediately notify the Department of same. N.J.S.A. 26:2C-9(b)(3), -19(e).

58. Further, pursuant to the Spill Act, when a hazardous substance is discharged, the Department may act in its discretion to clean up and remove or arrange for the cleanup and removal of the discharge or may direct the discharger to clean up and remove, or arrange for the cleanup and removal of, the discharge. N.J.S.A. 58:10-23.11f.a(1). The Department is authorized to direct a responsible party to pay for the cleanup and removal of the discharge prior to the Department cleaning up and removing or arranging for the cleanup and removal of the discharge. The Department is also authorized to seek compensation for damages incurred by all parties injured by these discharges. N.J.S.A. 58:10-23.11u.b. Any discharger that fails to comply with a directive shall be liable to the Department in an amount equal to three times the cost of such a cleanup and removal, and shall be subject to the revocation or suspension of any license issued or permit held authorizing that person to operate a hazardous waste facility or solid waste facility. N.J.S.A. 58:10-23.11f.7.a(1).
59. Pursuant to N.J.S.A. 58:10-23.11g.c. any person who has discharged a hazardous substance or is in any way responsible for any hazardous substance, shall be strictly liable, jointly and severally, without regard to fault, for all cleanup and removal costs no matter by whom incurred. Such person shall also be strictly liable, jointly and severally, without regard to fault, for all cleanup and removal costs incurred by the Department.
60. Pursuant to N.J.S.A. 58:10-23.11g.c., Respondents are or will be persons who discharged a hazardous substance or are in any way responsible for the discharge of a hazardous substance.
61. Respondents are persons whom the Department believes have, or may have, information relevant to a discharge or potential discharge of hazardous substances and pollutants, the disposal of solid waste and the release of air contaminants in a quantity or concentration which poses a potential threat to public health, welfare or the environment.
62. In accordance with the above, the Department hereby directs Respondents to take the following actions.

#### **Payment of Previously Incurred Costs**

63. Solvay, within 30 days after receipt of this Directive, shall reimburse the Department for the Department's previously incurred costs to investigate, treat, cleanup and remove PFNA, PFOA and other PFAS at and the area around its West Deptford facility, as recounted in paragraph 47 and 48 above. Solvay shall pay \$3,105,084.91 to the Department as reimbursement for the currently calculated past costs incurred.
64. The Department hereby directs Solvay to assume responsibility for operation and maintenance of all of the POETs installed to address PFNA associated with the Solvay Site by taking the following actions according to the following expedited site-specific timeframes, established pursuant to N.J.A.C. 7:26C-3.4. Note the timeframes specified herein do not represent an extension to any past due timeframes and the Department reserves the right to pursue penalties back to the original due dates:

- West Deptford Township, Gloucester County

- Greenwich Township, Gloucester County

- Logan Township, Gloucester County

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- Swedesboro Borough, Gloucester County

- ii) Within ninety (90) days after receipt of this Directive, assume operation and maintenance of the thirty (30) POETs installed by the Department at the following locations to address PFOA contamination associated with the Solvay Site:

- 41) Block 502, Lot 5, 43 Floodgate Road
- 42) Block 605, Lot 8, 139 Repaupo Station Road
- 43) 605, Lot 17.01, 204 Repaupo Road
- 44) Block 1003, Lot 13.01, 738 Oakgrove Road
- 45) Block 1003, Lot 12.01 736 Oak Grove Road
- 46) Block 1003, Lot 3.01 82 Coontown Road
- 47) Block 11102, Lot 22, 2789 Route 322
- 48) Block 2801, Lot 11, 304 Pedricktown Road
- 49) Block 1102, Lot 21, 2799 Route 322
- 50) Block 3102, Lot 1, 133 Route 130
- 51) Block 3102, Lot 9, 139 Route 130
- 52) Block 3102, Lot 3, 2537 Center Square Road
- 53) Block \_\_\_\_, Lot \_\_\_\_, 137 Route 130 [To Be Updated]
- 54) Block 3101, Lot 10, 42 Jackson Street
- 55) Block 1301, Lot 8, 32 Jackson Street
- 56) Block 3103, Lot 9, 36 Jackson Street
- 57) Block 3103, Lot 7, 26 Jackson Street

58) Block\_\_\_\_, Lot\_\_\_\_, 324 Floodgate Road [To Be Updated]

Greenwich, Gloucester County

59) Block 255, Lot 1.01, 641 Swedesboro Road

Oldman's Township, Salem County

- 60) Block 2801, Lot 56, 16 Pedricktown-Woodstown Road
- 61) Block 28.01, Lot 60, 18 Seminole Lane
- 62) Block 28.01, Lot 59, 6 Seminole Lane
- 63) Block 3, Lot 13, 191A North Railroad Avenue
- 64) Block 29, Lot 8.01, 158 Straughns Mill Road
- 65) Block 28.01, Lot 10, 52 Pedricktown-Woodstown Road
- 66) Block 28, Lot 27, 80 Tighe Road
- 67) Block 29, Lot 8.02, 162 Straughns Mill Road
- 68) Block 28, Lot 27.04, 379 Perkindown Road
- 69) Block 28.01, Lot 54, 24 Seminole Lane
- 70) Block \_\_\_\_, Lot \_\_\_\_, 178 Pedricktown-Woodstown Road [TO BE UPDATED]

- c) Within ninety (90) days after receipt of this Directive identify and sample all potable wells within 500 feet down gradient, 500 feet side gradient and 250 feet up gradient of each previously identified impacted potable well, pursuant to N.J.A.C. 7:26E-1.11.
- d) Within one hundred twenty (120) days after receipt of this Directive implement treatment and monitoring, in accordance with N.J.A.C. 7:26E-1.11, for potable wells with documented exceedances of the 13 ppt PFNA MCL attributable to the Site, and/or with documented exceedances of the 14 ppt action level for PFOA.

65. Solvay shall submit an updated Remediation Cost Review and Remediation Funding Source/Financial Assurance Form to include the cost of additionally required potable sampling and implementation of treatment and monitoring.

66. Payments made pursuant to paragraphs 47, 48 and 63 above shall be made by certified check or cashier's check payable to "Treasurer, State of New Jersey" and mailed to:

Division of Revenue and Enterprise Services  
P.O. Box 417  
Trenton, New Jersey 08646-0417

With a copy to:

[illegible]

**Abstract** The purpose of this study was to determine whether there were differences in the prevalence of periodontitis between patients with type 2 diabetes mellitus (T2DM) and non-diabetic controls. A total of 60 patients with T2DM and 60 age- and sex-matched non-diabetic controls were recruited from a general dental practice. All participants underwent a clinical examination of their periodontium using a Williams' probe. The prevalence of periodontitis was determined by the presence of at least one site with a probing depth of ≥4 mm or bleeding on probing (BOP). The results showed that the prevalence of periodontitis was significantly higher in the T2DM group compared to the non-diabetic controls ( $p < 0.05$ ). The mean probing depth was also significantly greater in the T2DM group compared to the non-diabetic controls ( $p < 0.05$ ). These findings suggest that patients with T2DM are at a higher risk of developing periodontitis compared to non-diabetic individuals.

- [illegible]

**Abstract** The purpose of this study was to determine whether there were differences in the prevalence of periodontitis between patients with type 2 diabetes mellitus (T2DM) and non-diabetic controls. A total of 100 patients with T2DM and 100 age- and sex-matched non-diabetic controls were recruited from a general dental practice. All participants underwent a clinical examination of their periodontium using a Williams probe. The prevalence of periodontitis was determined by the presence of at least one site with a probing depth of ≥4 mm or bleeding on probing. The results showed that the prevalence of periodontitis was significantly higher in the T2DM group compared to the non-diabetic controls ( $p < 0.05$ ). These findings suggest that T2DM may be a risk factor for periodontitis.

- [illegible]

- b. Identify the nature, extent, source and location of discharges of PFNA, PFOA and PFOS into the waters of the State;
  - c. Identify the nature, extent, source and location of emissions of PFNA, PFOA and PFOS into air;
  - d. If the Respondent is not the manufacturer, supplier, or transporter of PFNA, PFOA and PFOS, identify any such manufacturer, supplier or transporter; and
  - e. The Respondent's ability to pay for, or perform, the cleanup and removal of PFNA, PFOA and PFOS from New Jersey's environment, and every "change of ownership" (as defined in N.J.S.A. § 13:1K-8) involving Respondents' current or former sites in New Jersey.
69. Each Respondent, as applicable, within 21 days of receipt of this Directive, shall provide the following information to the Department regarding its use of PFAS replacement chemicals (i.e., those short-chain PFAS chemicals used in any manufacturing process as a replacement for PFNA, PFOA and/or PFOS) in New Jersey:
- a. Identify all replacement chemicals manufactured, transported, stored, used, treated, disposed, and/or discharged in New Jersey, and the toxic characteristics of any such chemicals;
  - b. Identify the nature, extent, source and location of discharges of replacement chemicals into the waters of the State;
  - c. Identify the nature, extent, source and location of emissions of replacement chemicals into air;
  - d. If the Respondent is not the manufacturer or transporter of the replacement chemicals, identify any such manufacturer or transporter; and
  - e. The Respondent's ability to pay for, or perform, the cleanup and removal of replacement chemicals from New Jersey's environment.
70. Each Respondent, as applicable, in responding to the above-referenced information requests, must conduct a diligent search of its records and make reasonable inquiries of its employees, and further has the continuing obligation to supplement such information if additional relevant information is discovered, or if it determines information previously provided to the Department was false, inaccurate or misleading. N.J.S.A. 58-10A-10.3c(1)-(2).
71. For the avoidance of doubt, this Directive is not a formal enforcement order, a final agency action or a final legal determination that a violation has occurred. This Directive is not subject to pre-enforcement review and may not be appealed or contested.

#### NOTICE

72. Failure to comply with this Directive and Notice to Insurers will increase Respondents' potential liability to the Department in an amount equal to three (3) times the cost of arranging for the cleanup and removal of the discharge and may cause a lien to be placed on Respondents' real and

personal property pursuant to the Spill Act, N.J.S.A. 58:10-23.11f., including a first priority lien on the properties where the discharge(s) have occurred.

73. Pursuant to N.J.S.A. 58:10-23.11u., N.J.S.A. 58:10A-10, N.J.S.A. 26:2C-9, and N.J.S.A. 13:1E-9, the Department may require through a court action compliance with the Spill Act, WPCA, APCA, and SWMA. Failure by Respondents to comply with this Directive may result in an enforcement action by the Department, which will subject each Respondent to penalties of up to \$50,000 per day and each day of violation constitutes an additional, separate and distinct violation.

**RESERVATION OF RIGHTS**

74. The Department reserves the right to direct Respondents to take or arrange for the taking of any additional remediation that the Department determines to be necessary to protect the public health and safety and/or the environment and to seek full reimbursement and treble damages for all costs incurred in taking such additional remediation if Respondents fail to comply with the applicable provisions of this Directive.
75. The Department reserves all rights and remedies under the Spill Act, WPCA, SWMA and APCA as well as all other applicable statutes not set forth herein and the common law of New Jersey, including its right to bring an action in the Superior Court for appropriate relief.

75. The Department reserves all rights and remedies under the Spill Act, WPCA, SWMA and APCA as well as all other applicable statutes not set forth herein and the common law of New Jersey, including its right to bring an action in the Superior Court for appropriate relief.

## NOTICE TO INSURERS

76. Pursuant to N.J.S.A. 58:10-23.11s, any claims for costs of cleanup or damages by the State may be brought directly against the bond, insurer or any other person providing evidence of financial responsibility, and Respondents are directed to put their insurers on notice of such.

NEW JERSEY DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

DATE: March 25, 2019

By:

*Catherine R. McCabe*  
Catherine R. McCabe, Commissioner